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1 Claims

2 1. A method for yielding a virtual processor within a logically
3 partitioned data processing system, wherein the system supports a plurality of
4 partitions, a first of which includes a plurality of virtual processors that share
5 at least one CPU, the method comprising:

6 requesting with a yielding virtual processor a yield of the CPU
7 upon which the virtual processor is executing, including designating a target
8 virtual processor from among the plurality of virtual processors; and

9 switching-in the target virtual processor for execution by the
10 CPU in response to the requested yield.

1 2. The method according to claim 1, wherein the target virtual
2 processor requires access to the CPU, wherein the yielding virtual processor
3 controls the CPU.

1 3. The method according to claim 1, further comprising
2 generating a yield command from the virtual processor, wherein the yield
3 command includes pointer and status information regarding the target virtual
4 processor.

1 4. The method according to claim 1, further comprising
2 assigning status information to the target virtual processor.

1 5. The method according to claim 1, further comprising
2 assigning a target count to the target virtual processor.

1 6. The method according to claim 5, further comprising
2 comparing the target count to a presented count conveyed in the yield
3 command.

1 7. The method according to claim 1, further comprising
2 aborting the yield in response to a yield-to-active command.

1 8. The method according to claim 1, further comprising
2 designating the yielding virtual processor as waiting for the target processor.

1 9. The method according to claim 1, further comprising
2 designating the target virtual processor as having a yielding processor waiting
3 for the target virtual processor.

1 10. The method according to claim 1, further comprising
2 storing the state of the yielding virtual processor.

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1 11. An apparatus comprising:
2 a logically partitioned computer including a plurality of logical
3 partitions, a first of which including a plurality of virtual processors that share
4 at least one CPU; and

5 a program resident in the computer, the program configured to
6 initiate a request for a yield of a CPU controlled by a yielding virtual
7 processor, wherein the request designates a target virtual processor from
8 among the plurality of virtual processors; and further configured to logically
9 reassign control of the CPU from the yielding virtual processor to the target
10 virtual processor.

1 12. The apparatus according to claim 11, wherein the target
2 virtual processor requires access to the CPU, wherein the yielding virtual
3 processor controls the CPU.

1 13. The apparatus according to claim 11, wherein the program
2 initiates generation of a yield command from the virtual processor, wherein the
3 yield command includes pointer and status information regarding the target
4 virtual processor.

1 14. The apparatus according to claim 11, wherein the program
2 initiates an assignment of a target count to the target virtual processor.

1 15. The apparatus according to claim 14, wherein the program
2 initiates a comparison of the target count to a presented count conveyed in the
3 yield command.

1 16. The apparatus according to claim 11, wherein the program
2 initiates abandonment of the yield in response to a yield-to-active command.

1 17. The apparatus according to claim 11, wherein the program
2 initiates a designation of the yielding virtual processor as waiting for the target
3 processor.

1 18. The apparatus according to claim 11, wherein the program
2 designates the target virtual processor as having a yielding processor waiting
3 for the target virtual processor.

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1 19. A program product, comprising:
2 (a) a program configured to initiate a request for a yield
3 of a CPU controlled by a yielding virtual processor among a
4 plurality of virtual processors in a logically partitioned data
5 processing system, wherein the request designates a target
6 virtual processor from among the plurality of virtual processors;
7 and further configured to logically reassign control of the CPU
8 from the yielding virtual processor to the target virtual
9 processor.

10 (b) a signal bearing medium bearing the first program.

1 20. The program product of claim 19, wherein the signal
2 bearing medium includes at least one of a recordable medium and a
3 transmission-type medium.